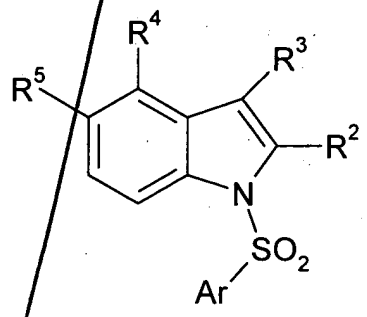
1. A compound of formula (I):



(I)

wherein

Ar is

(1) phenyl,

(2) naphthyl,

(3) a 5- to 10-membered monocyclic or bicyclic heterocyclic ring having 1 to 4 heteroatoms selected from the group consisting of oxygen, sulfur, or nitrogen, or

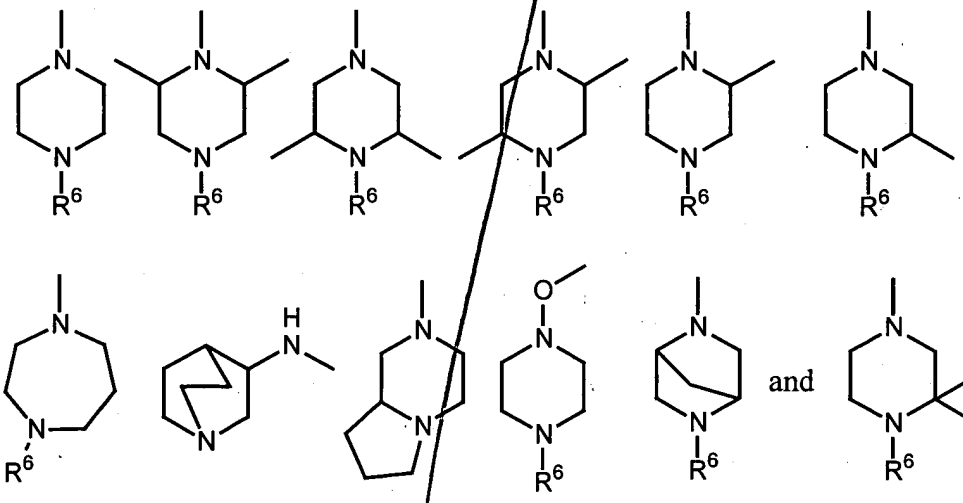
(4) -R^9-phenyl;

wherein the phenyl, naphthyl, or heterocyclic ring is optionally substituted with halogen, C_{1-6} alkyl, CF_3, hydroxyl, C_{1-6} alkoxyl, OCF_3, $COCF_3$, CN, NO_2, phenyloxy, phenyl, C_{1-6} alkylsulfonyl, C_{2-6} alkenyl, -NR^7R^8, C_{1-6} alkylcarboxyl, formyl, -C_{1-6} alkyl-NH-CO-phenyl, -C_{1-6} alkyl-CO-NH-phenyl, -NH-CO-C_{1-6} alkyl, -CO-NR^7R^8, or SR^7; wherein each of R^7 and R^8 is independently H or C_{1-6} alkyl; and R^9 is C_{1-6} alkyl or C_{2-6} alkenyl, either of which is optionally substituted with phenyl or phenyloxy;

R^2 is H, phenyl, I, or C_{1-6} alkyl;

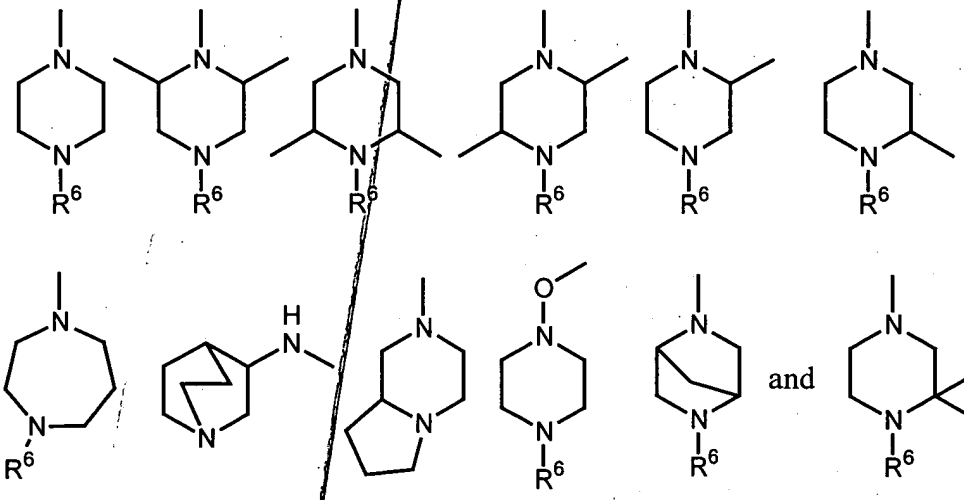
R^3 is H or 3-(1-azabicyclo[2.2.2]oct-2-en)yl;

R^4 is H or is selected from the group consisting of:



wherein R^6 is H, C_{1-6} alkyl, or benzyl; and

R^5 is H, hydroxy, C_{1-3} alkoxy, F, NO_2, CF_3, OCF_3, or is selected from the group consisting of:



or a pharmaceutically acceptable salt, hydrate, or stereoisomer thereof,

with the proviso that when R^2 is alkyl, R^4 is not H.

2. The compound according to claim 1, wherein

Ar is

(1) phenyl that is unsubstituted or optionally mono- or poly-substituted with halogen, C_{1-6} alkyl, CF_3, hydroxyl, C_{1-6} alkoxyl, OCF_3, CN, NO_2, phenyloxyl, phenyl, alkylsulfonyl, C_{1-6} alkenyl, $-NH_2$, $-NHR^7$, $-NR^7R^8$, C_{1-6} alkylcarboxyl, formyl, -NH-CO-

C_{1-6} alkyl, -CO-NR^7R^8, or SR^7 wherein each of R^7 and R^8 is independently H or C_{1-6} alkyl;

(2) 1-naphthyl or 2-naphthyl that is unsubstituted or optionally mono- or poly-substituted with halogen, C_{1-6} alkyl, CF_3, hydroxyl, C_{1-6} alkoxyl, OCF_3, CN, NO_2, phenyloxyl, phenyl, alkylsulfonyl, C_{1-6} alkenyl, -NH_2, -NHR^7, -NR^7R^8, C_{1-6} alkylcarboxyl, formyl, -NH-CO-C_{1-6} alkyl, -CO-NR^7R^8, or SR^7 wherein each of R^7 and R^8 is independently H or C_{1-6} alkyl;

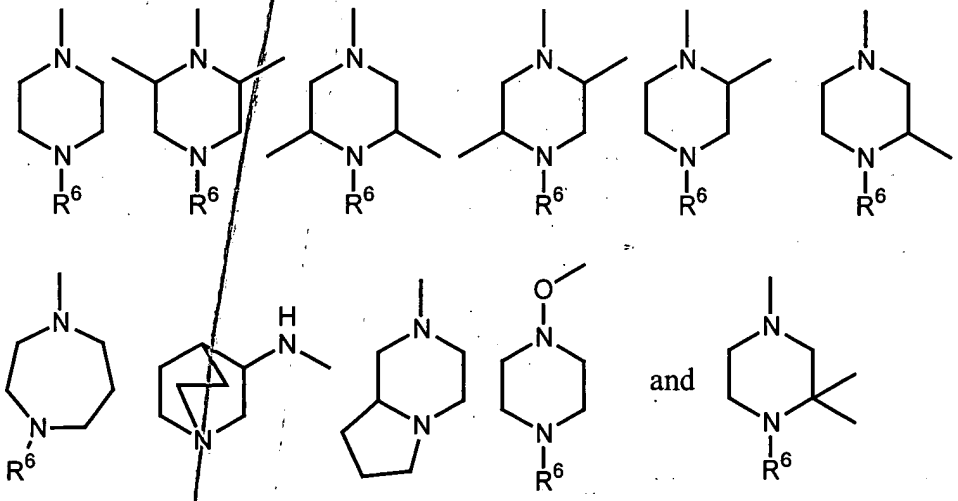
(3) cynnamoyl;

(4) benzyl;

(5) 1,1-diphenylethyl;

(6) a monocyclic or bicyclic heterocyclic ring selected from the group consisting of furyl, pyrrolyl, triazolyl, diazolyl, oxazolyl, thiazolyl, oxadiazolyl, isothiazolyl, isoxazolyl, thiadiazolyl, pyrimidyl, pyrazinyl, thienyl, imidazolyl, pyrazolyl, indolyl, quinolinyl, isoquinolinyl, benzofuryl, benzothienyl, and benzoxadiazolyl, said heterocyclic ring being optionally mono- or di-substituted substituted with halogen or C_{1-6} alkyl;

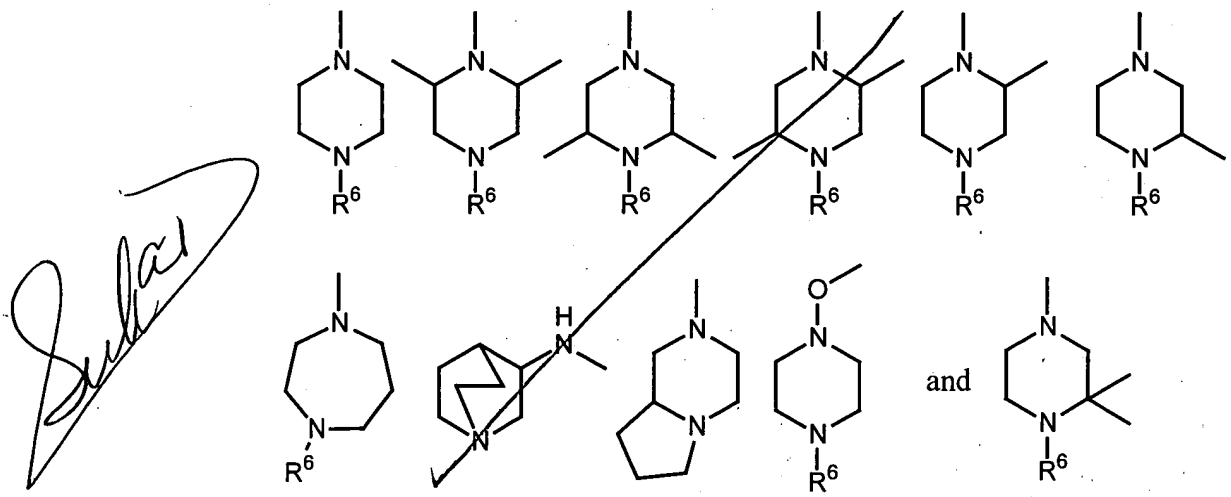
R^4 is H or is selected from the group consisting of:



;

wherein R^6 is H, C_{1-6} alkyl, or benzyl; and

R^5 is H, hydroxy, C_{1-3} alkoxy, F, NO_2, CF_3, OCF_3 or is selected from the group consisting of:



3. A compound according to claim 1, wherein

Ar is

(1) phenyl,

(2) 1-naphthyl or 2-naphthyl,

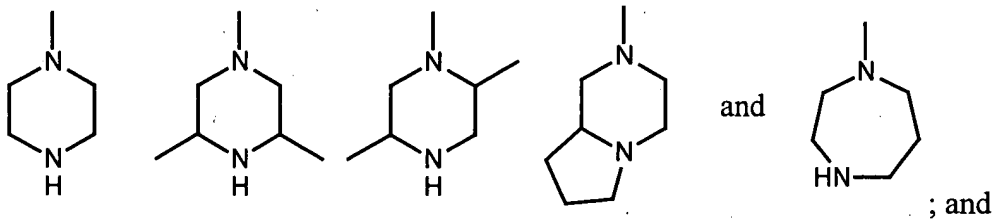
(3) a 5- to 10-membered monocyclic or bicyclic heterocyclic ring having 1 to 4 heteroatoms selected from the group consisting of oxygen, sulfur, or nitrogen, or

(4) -R^9-phenyl;

wherein the phenyl, naphthyl, or heterocyclic ring is optionally substituted with F, Cl, Br, C_{1-6} alkyl, CF_3, hydroxyl, C_{1-6} alkoxyl, OCF_3, phenyl, C_{2-6} alkenyl, -NR^7R^8, -NH-CO-C_{1-6} alkyl, or SR^7, wherein each of R^7 and R^8 is independently H or C_{1-6} alkyl; and R^9 is C_{1-2} alkyl;

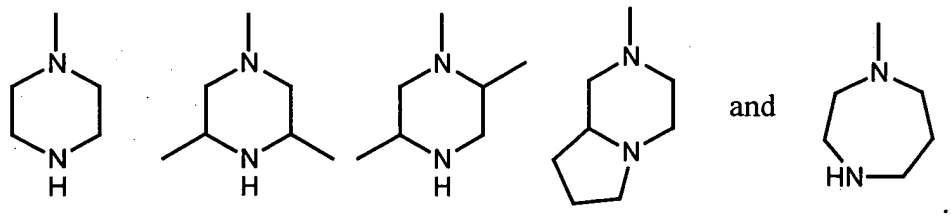
R^2 is H, phenyl, I, or C_{1-6} alkyl;

R^4 is selected from the group consisting of:



; and

R^5 is C_{1-3} alkoxy or a heterocyclic ring selected from the group consisting of:



4. A compound according to claim 1, wherein Ar is phenyl, optionally substituted with F, Cl, Br, methyl, CF_3, C_{1-4} alkoxyl, OCF_3, CN, NO_2, phenyloxy, phenyl, methylsulfonyl, or $-NR^7R^8$, where each of R^7 and R^8 is independently H or methyl.

5. A compound according to claim 1, wherein Ar is 1-naphthyl or 2-naphthyl, each of which is optionally substituted with F, Cl, Br, methyl, CF_3, C_{1-4} alkoxyl, OCF_3, CN, NO_2, phenyloxy, phenyl, methylsulfonyl, or $-NR^7R^8$, where each of R^7 and R^8 is independently H or methyl.

6. A compound according to claim 1, wherein Ar is a heterocyclic ring selected from the group consisting of furyl, pyrrolyl, triazolyl, diazolyl, oxazolyl, thiazolyl, oxadiazolyl, isothiazolyl, isoxazolyl, thiadiazolyl, pyridinyl, pyrimidyl, pyrazinyl, thienyl, imidazolyl, pyrazolyl, indolyl, quinolinyl, isoquinolinyl, benzofuryl, benzothienyl, and benzoxadiazolyl, each of which is optionally substitiuted with halogen, C_{1-6} alkyl, CF_3, hydroxyl, C_{1-6} alkoxyl, OCF_3, CN, NO_2, phenyloxy, phenyl, C_{1-6} alkylsulfonyl, C_{2-6} alkenyl, $-NR^7R^8$, C_{1-6} alkylcarboxyl, formyl, -NH-CO-C_{1-6} alkyl, -CO-NR^7R^8, or SR^7; wherein each of R^7 and R^8 is independently H or C_{1-6} alkyl.

7. A compound according to claim 1, wherein Ar is a heterocyclic ring selected from the group consisting of pyridinyl, thienyl, imidazolyl, pyrazolyl, benzothienyl, and benzoxadiazolyl, each of which is optionally substituted with halogen or C_{1-6} alkyl.

8. A compound according to claim 1, wherein Ar is 2-pyridyl, 3-pyridyl, or 4-pyridyl.

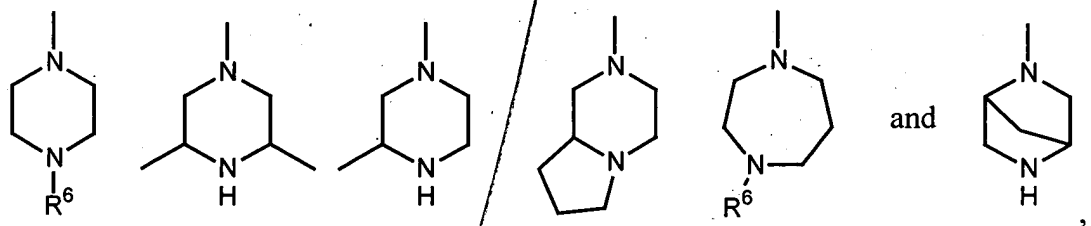
9. A compound according to claim 1, wherein Ar is a 5- to 7-membered aromatic, partially saturated, or completely saturated heterocyclic ring having 1 to 4 heteroatoms

selected from the group consisting of O, S, or NR^{10}, where R^{10} is H, C_{1-6} alkyl, -CO-CF_3, or absent.

10. A compound according to claim 1, wherein Ar is -R^9-phenyl, wherein R^9 is C_{1-3} alkyl or C_{2-3} alkenyl, either of which is optionally substituted with phenyl or phenyloxy, each phenyl being optionally substituted with F, Cl, Br, methyl, CF_3, C_{1-4} alkoxyl, OCF_3, CN, NO_2, phenyloxy, phenyl, methylsulfonyl, or -NR^7R^8; and each of R^7 and R^8 being independently H or C_{1-6} alkyl.

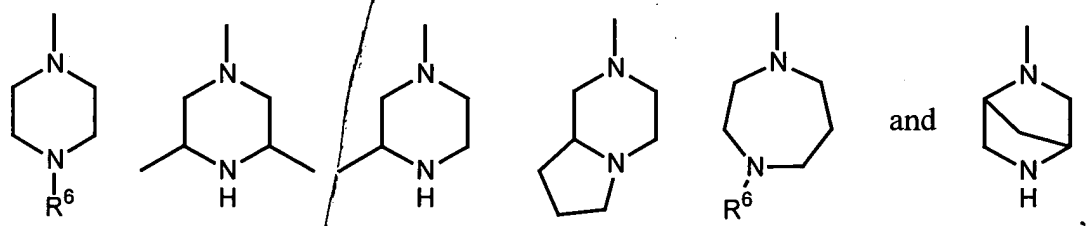
11. A compound according to claim 1, wherein each of R^2 and R^3 is H.

12. A compound according to claim 1, wherein each of R^4 and R^5 is independently H or a heterocyclic ring selected from the group consisting of:



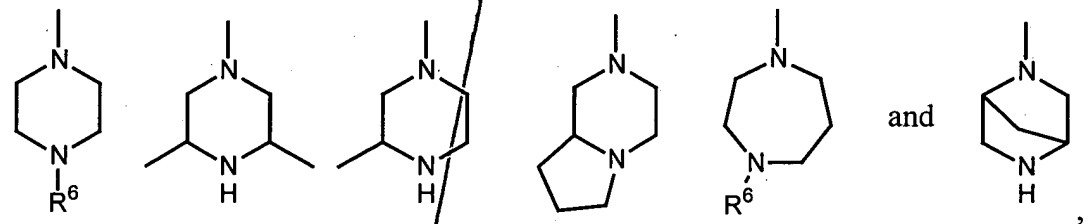
wherein R^6 is H, C_{1-3} alkyl, or benzyl.

13. A compound according to claim 1, wherein Ar is phenyl, optionally substituted with F, Cl, Br, methyl, CF_3, C_{1-4} alkoxyl, OCF_3, CN, NO_2, phenyloxy, phenyl, methylsulfonyl, or -NR^7R^8 where each of R^7 and R^8 is independently H or methyl; each of R^2 and R^3 is H; and each of R^4 and R^5 is independently H or a heterocyclic ring selected from the group consisting of:



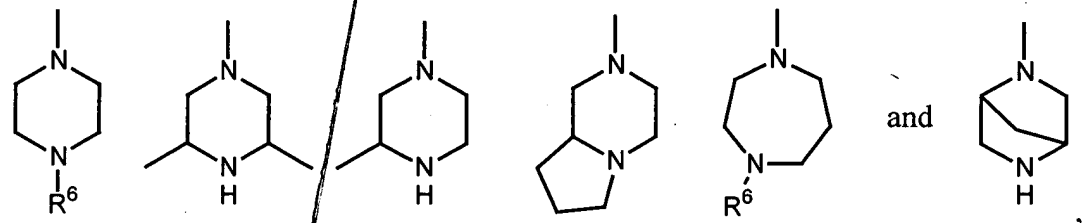
wherein R^6 is H, C_{1-3} alkyl, or benzyl.

14. A compound according to claim 1, wherein Ar is 1-naphthyl or 2-naphthyl, each of which is optionally substituted with F, Cl, Br, methyl, CF_3, C_{1-4} alkoxyl, OCF_3, CN, NO_2, phenyloxy, phenyl, methylsulfonyl, or $-NR^7R^8$, where each of R^7 and R^8 is independently H or methyl; each of R^2 and R^3 is H; and each of R^4 and R^5 is independently H or a heterocyclic ring selected from the group consisting of:



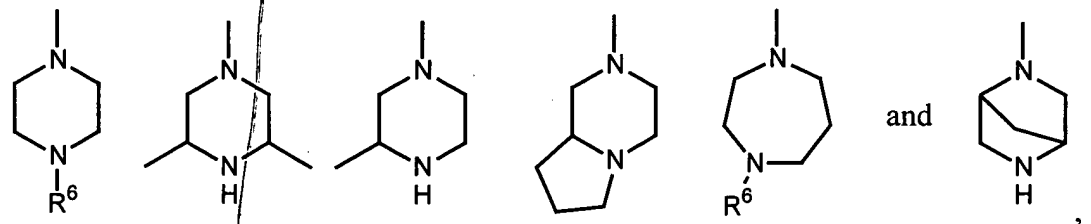
wherein R^6 is H, C_{1-3} alkyl, or benzyl.

15. A compound according to claim 1, wherein Ar is a heterocyclic ring selected from the group consisting of pyridinyl, thienyl, imidazolyl, pyrazolyl, benzothienyl, and benzoxadiazolyl, each being optionally substituted with halogen or C_{1-6} alkyl; each of R^2 and R^3 is H; and each of R^4 and R^5 is independently H or a heterocyclic ring selected from the group consisting of:



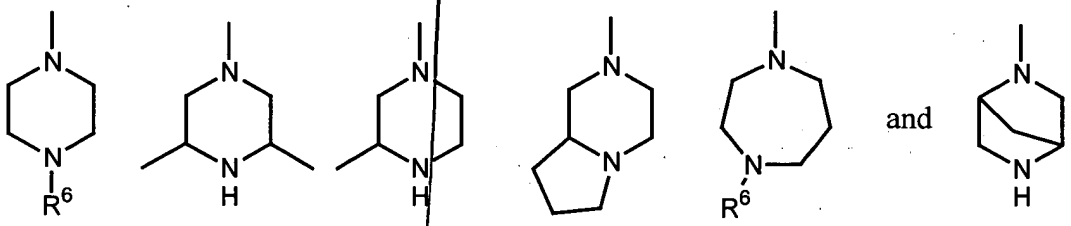
wherein R^6 is H, C_{1-3} alkyl, or benzyl.

16. A compound according to claim 1, wherein Ar is 2-pyridyl, 3-pyridyl, or 4-pyridyl; each of R^2 and R^3 is H; and each of R^4 and R^5 is independently H or a heterocyclic ring selected from the group consisting of:



wherein R^6 is H, C_{1-3} alkyl, or benzyl.

17. A compound according to claim 1, wherein Ar is -R^9-phenyl; each of R^2 and R^3 is H; and each of R^4 and R^5 is independently H or a heterocyclic ring selected from the group consisting of:



wherein R^6 is H, C_{1-3} alkyl, or benzyl; R^9 is C_{1-3} alkyl or C_{2-3} alkenyl, either of which is optionally substituted with phenyl or phenyloxy; each phenyl being optionally substituted with F, Cl, Br, methyl, CF_3, C_{1-4} alkoxyl, OCF_3, CN, NO_2, phenyloxy, phenyl, methylsulfonyl, or -NR^7R^8; and each of R^7 and R^8 being independently H or C_{1-6} alkyl.

18. A compound selected from the group consisting of:

1-phenylsulfonyl-4-piperazinylindole hydrochloride,

1-[(2,5-dimethoxyphenyl)sulfonyl]-4-(1-piperazinyl)-1H-indole hydrochloride,

1-(mesitylsulfonyl)-4-(1-piperazinyl)-1H-indole hydrochloride,

1-(1-naphthylsulfonyl)-4-(1-piperazinyl)-1H-indole hydrochloride,

N,N-dimethyl-5-{[4-(1-piperazinyl)-1H-indol-1-yl]sulfonyl}-1-naphthalenamine hydrochloride,

1-[(4-propoxyphenyl)sulfonyl]-4-(1-piperazinyl)-1H-indole hydrochloride,

1-[(2,5-dichloro-3-thienyl)sulfonyl]-4-(1-piperazinyl)-1H-indole hydrochloride,

1-[(4-methoxyphenyl)sulfonyl]-4-(1-piperazinyl)-1H-indole hydrochloride,

1-[(2,4-difluorophenyl)sulfonyl]-4-(1-piperazinyl)-1H-indole hydrochloride,

1-([1,1'-biphenyl]-4-ylsulfonyl)-4-(1-piperazinyl)-1H-indole hydrochloride,

1-[(3,4-dimethoxyphenyl)sulfonyl]-4-(1-piperazinyl)-1H-indole hydrochloride,

5-methyl-2-methoxyl-{[4-(1-piperazinyl)-1H-indol-1-yl]sulfonyl}phenyl ether hydrochloride,

1-[(2,5-dichlorophenyl)sulfonyl]-4-(1-piperazinyl)-1H-indole hydrochloride,

1-[(5-chloro-1,3-dimethyl-1H-pyrazol-4-yl)sulfonyl]-4-(1-piperazinyl)-1H-indole hydrochloride,

1-[(3-chloro-2-methylphenyl)sulfonyl]-4-(1-piperazinyl)-1H-indole hydrochloride,

2-chloro-5-(4-{[4-(1-piperazinyl)-1H-indol-1-yl]sulfonyl}phenoxy)benzonitrile hydrochloride,

4-bromo-2-{[4-(1-piperazinyl)-1H-indol-1-yl]sulfonyl}phenyl methyl ether hydrochloride,

4-(1-piperazinyl)-1-(3-pyridinylsulfonyl)-1H-indole hydrochloride,

7-{[4-(1-piperazinyl)-1H-indol-1-yl]sulfonyl}-2-(trifluoroacetyl)-1,2,3,4-tetrahydroisoquinoline hydrochloride,

methyl 2-{[4-(1-piperazinyl)-1H-indol-1-yl]sulfonyl}phenyl sulfone hydrochloride,

1-[(4-fluorophenyl)sulfonyl]-4-(1-piperazinyl)-1H-indole hydrochloride,

1-[(5-chloro-3-methyl-1-benzothien-2-yl)sulfonyl]-4-(1-piperazinyl)-1H-indole hydrochloride,

4-(4-methyl-1-piperazinyl)-1-(4-methylbenzenesulfonyl)-1H-indole hydrochloride hydrochloride,

4-piperazino-N-(4-trifluoromethyl)phenylsulfonyl)indole hydrochloride,

4-(3-methylpiperazine)-(N-(4-trifluoromethyl)phenylsulfonyl)indole dihydrochloride,

4-(4-methyl-1-piperazinyl)-1-(2-methylbenzenesulfonyl)-1H-indole hydrochloride,

4-(4-ethyl-1-piperazinyl)-1-(2-methylbenzenesulfonyl)-1H-indole hydrochloride,

4-(1-piperazinyl)-1-(2-methylbenzenesulfonyl)-1H-indole hydrochloride,

4-(5-aza-indolizidinyl)-1-(2-methylbenzenesulfonyl)-1H-indole hydrochloride,

4-(4-methyl-1-homopiperazinyl)-1-(2-methylbenzenesulfonyl)-1H-indole hydrochloride,

4-(3-methyl-1-piperazinyl)-1-(2-methylbenzenesulfonyl)-1H-indole hydrochloride,

4-(*cis*-3,5-dimethyl-1-piperazinyl)-1-(2-methylbenzenesulfonyl)-1H-indole hydrochloride,

4-(4-isopropyl-1-piperazinyl)-1-(2-methylbenzenesulfonyl)-1H-indole hydrochloride,

4-((1S,4S)-2-methyl-2,5-diazabicyclo[2.2.1]heptyl)-1-(2-methylbenzenesulfonyl)-1H-indole hydrochloride,

4-(4-methyl-1-homopiperazinyl)-1-(benzenesulfonyl)-1H-indole hydrochloride,

4-(*cis* 3,5-dimethyl-1-piperazinyl)-1-(benzenesulfonyl)-1H-indole hydrochloride,

4-(4-ethyl-1-piperazinyl)-1-(benzenesulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(4-nitro-benzenesulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(4-bromo-benzenesulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(4-chloro-benzenesulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(*E* 2-phenyl-ethensulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(3-trifluoromethyl-benzenesulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(4-cyanobenzenesulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(4-chloro-7-chloro-2,1,3-benzoxadiazole sulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(3-cyanobenzenesulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(4-phenoxybenzenesulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(4-chlorophenylmethanesulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(4-methylphenylmethanesulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(1,1-diphenylethanesulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(4-trifluoromethoxybenzenesulfonyl)-1H-indole hydrochloride,

4-piperazinyl-1-(5-[(benzoylamino)methyl]thiophene-2-sulfonyl)-1H-indole hydrochloride,

1-[(N-methyl-1H-imidazol-4-yl)sulfonyl]-4-(1-piperazinyl)-1H-indole hydrochloride,

N-benzenesulfonyl-5-(4-methylpiperazin-1-yl)-indole,

N-(4-methylbenzenesulfonyl)-5-(4-methylpiperazin-1-yl)-indole,

N-benzenesulfonyl-5-(4-isopropylpiperazin-1-yl)-indole,

N-(4-methylbenzenesulfonyl)-5-(4-isopropylpiperazin-1-yl)-indole,

N-(3,4-dimethoxybenzenesulfonyl)-5-(4-propylpiperazin-1-yl)-indole, hydrochloride,

N-(3-fluorobenzenesulfonyl)-5-(4-propylpiperazin-1-yl)-indole, hydrochloride,

N-(4-propylbenzenesulfonyl)-5-(4-methylpiperazin-1-yl)-indole, hydrochloride,

N-(1-naphtalenesulfonyl)-5-(4-methylpiperazin-1-yl)-indole, hydrochloride,

N-(biphenyl-4-sulfonyl)-5-(4-methylpiperazin-1-yl)-indole, hydrochloride,

N-(4-methoxybenzenesulfonyl)-5-(4-methylpiperazin-1-yl)-indole, hydrochloride,

N-(3,4-dimethoxybenzenesulfonyl)-5-(4-methylpiperazin-1-yl)-indole, hydrochloride,

N-(2,4-difluorobenzenesulfonyl)-5-(4-methylpiperazin-1-yl)-indole, hydrochloride,

N-(4-methoxybenzenesulfonyl)-5-(4-benzylpiperazin-1-yl)-indole, hydrochloride,

N-(2,4-difluorobenzenesulfonyl)-5-(4-benzylpiperazin-1-yl)-indole, hydrochloride,

N-(4-butoxybenzenesulfonyl)-5-(4-benzylpiperazin-1-yl)-indole, hydrochloride,

N-(3,4-dimethoxybenzenesulfonyl)-5-(4-benzylpiperazin-1-yl)-indole, hydrochloride,

N-(biphenyl-4-sulfonyl)-5-(4-benzylpiperazin-1-yl)-indole, hydrochloride,

N-(napthalene-2-sulfonyl)-5-(4-benzylpiperazin-1-yl)-indole, hydrochloride,

N-(4-propylbenzenesulfonyl)-5-(4-benzylpiperazin-1-yl)-indole, hydrochloride,

N-(3-fluorobenzenesulfonyl)-5-(4-benzylpiperazin-1-yl)-indole, hydrochloride,

N-(4-methoxybenzenesulfonyl)-5-(piperazin-1-yl)-indole, hydrochloride,

N-(2,4-difluorobenzenesulfonyl)-5-(piperazin-1-yl)-indole, hydrochloride,

N-(4-butoxybenzenesulfonyl)-5-(piperazin-1-yl)-indole, hydrochloride,

N-(3,4-dimethoxybenzenesulfonyl)-5-(piperazin-1-yl)-indole, dihydrochloride,

N-(biphenyl-4-sulfonyl)-5-(piperazin-1-yl)-indole, dihydrochloride,

N-(napthalene-2-sulfonyl)-5-(piperazin-1-yl)-indole, dihydrochloride,

N-(4-propylbenzenesulfonyl)-5-(piperazin-1-yl)-indole, dihydrochloride,

N-(3-fluorobenzenesulfonyl)-5-(piperazin-1-yl)-indole, dihydrochloride,

N-benzenesulfonyl-5-(piperazin-1-yl)-indole, dihydrochloride,
3-(1-azabicyclo[2.2.2]oct-2-en-3-yl)-1-[(4-fluorophenyl)sulfonyl]-1H-indole,
2-iodo-1-(phenylsulfonyl)-4-(1-piperazinyl)-1H-indole hydrochloride,
2-phenyl-1-(phenylsulfonyl)-4-(1-piperazinyl)-1H-indole hydrochloride,
4-piperazinyl-2-methyl-1-benzosulfonylindole trifluoroacetate, and
1-phenylsulfonyl-4-(homopiperazinyl)-indole hydrochloride.

19. A compound according to claim 1, said compound being 1-(phenylsulfonyl)-4-(1-piperazinyl)-1H-indole.

20. A compound according to claim 1, said compound being 1-[(2,5-dimethoxyphenyl)sulfonyl]-4-(1-piperazinyl)-1H-indole.

21. A compound according to claim 1, said compound being 4-(1-piperazinyl)-1-(3-pyridinylsulfonyl)-1H-indole hydrochloride.

22. A pharmaceutical composition comprising a compound of claim and a pharmaceutically acceptable carrier.

23. A pharmaceutical composition comprising a compound of claim 18 and a pharmaceutically acceptable carrier.

24. A method of treatment or prophylaxis of a disease mediated by the serotonin related 5-HT_6 receptor comprising administering to a patient in need thereof a therapeutically effective amount of a compound according to claim 1.

25. A method of treatment or prophylaxis of a disease mediated by the serotonin related 5-HT_6 receptor comprising administering to a patient in need thereof a therapeutically effective amount of a compound according to claim 18.

26. The method according to claim 24, wherein the disease is obesity.

27. The method according to claim 24, wherein the disease is a CNS disorder.